Art Unit 162.

Reply to Office Action of December 6, 2007

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present

application.

Listing of Claims:

1. (Original) A method for preparing a cellulose ether comprising mixing cellulose with

an ionic liquid solvent to dissolve the cellulose, and then treating the dissolved cellulose with an

etherifying agent in the presence of an inorganic base to form a cellulose ether, and subsequently

separating the cellulose ether from the solution, wherein both the dissolution and the

etherification are carried out in the absence of an organic base and in the substantial absence of

water.

2. (Original) The method according to claim 1 wherein microwave irradiation is applied

to assist in dissolution and etherification.

3. (Previously Presented) The method according to claim 1 wherein pressure is applied

to assist in dissolution and etherification.

4. (Original) The method according to claim 1 wherein the ionic liquid solvent is molten

at a temperature of below 200°C.

2 of 14

GMM/ETP

Reply to Office Action of December 6, 2007

5. (Currently Amended) The method according to claim 1 wherein the cation of the ionic liquid solvent is selected from the group consisting of

Docket No.: 0696-0240PUS1

Reply to Office Action of December 6, 2007

wherein R^1 and R^2 are independently a C_1 - C_6 alkyl or C_2 - C_6 alkoxyalkyl group, and R^3 , R^4 , R^5 , R^6 , R^7 , R^8 and R^9 are independently hydrogen, a C_1 - C_6 alkyl, C_2 - C_6 alkoxyalkyl or C_1 - C_6 alkoxy group or halogen, and

wherein the anion of the ionic liquid solvent is halogen, pseudohalogen, thiocyanate, cyanate, perchlorate or C1-C6 carboxylate.

 (Currently Amended) The method according to claim 5 wherein said cation comprises

wherein R^3 - R^5 are each hydrogen and R^1 and R^2 are the same or different and represent C_1 - C_6 alkyl, and said anion is halogen, preferably chloride.

7. (Currently Amended) The method according to claim 1 wherein the cation of the ionic liquid solvent is

wherein R¹⁰, R¹¹, R¹² and R¹³ are independently a C₁-C₃₀ alkyl, C₃-C₈ carbocyclic or C₃-C₈ heterocyclic group and the anion of the ionic liquid solvent is halogen, pseudohalogen, thiocyanate, cyanate, perchlorate, C₁-C₆ carboxylate or hydroxide.

4 of 14 GMM/ETP

8. (Original) The method according to claim 1 wherein the inorganic base is lithium,

Docket No.: 0696-0240PUS1

sodium or potassium hydroxide.

9. (Previously Presented) The method according to claim 1 wherein the ether group of

the cellulose ether is a C1-C6 alkyl, aryl or aryl C1-C3 alkyl group optionally substituted by one or

more functional groups selected from the group consisting of carboxyl, hydroxyl, amino, alkoxy,

halogen, evano, amide, sulfo, phosphoro, nitro and silvl.

10. (Previously Presented) The method according to claim 1 wherein the ether group of

the cellulose ether is a silyl group substituted by three groups selected from the group consisting

of C1-C9 alkyl, aryl and aryl C1-C3 alkyl.

(Original) The method according to claim 1 wherein the etherifying agent is a C₁-C₆

alkyl, aryl or aryl C1-C3 alkyl halogenide or sulfate optionally substituted by one or more

functional groups selected from the group consisting of carboxyl, hydroxyl, amino, alkoxy,

halogen, cyano, amide, sulfo, phosphoro, nitro and silyl.

12. (Original) The method according to claim 11 wherein the etherifying agent is sodium

chloroacetate.

13. (Original) The method according to claim 1 wherein the etherifying agent is an

epoxide.

5 of 14 GMM/ETP

14. (Original) The method according to claim 1 wherein the etherifying agent is an

acrylic compound.

15. (Original) The method according to claim 1 wherein the etherifying agent is a

diazoalkane compound.

16. (Original) The method according to claim 1 wherein the cellulose ether is separated

from the solution by adding a non-solvent for the cellulose ether to precipitate the cellulose ether.

17. (Original) The method according to claim 16 wherein said non-solvent is an alcohol,

a ketone, acetonitrile, dichloromethane, a polyglycol, an ether or water.

18. (Currently Amended) The method according to claim 1 wherein the cellolose

cellulose ether is separated by extraction with a non-solvent for the ionic liquid solvent.

19. (New) The method according to claim 6 wherein said anion is chloride.

Docket No.: 0696-0240PUS1